

REMARKS/ARGUMENTS

The above amendment and the following remarks are in reply to the Office action of 03/19/2008. In light of this reply, reconsideration and further examination of this application are respectfully requested.

Nine claims (15, 17-19 and 21-25) were pending in this application. In the above amendment, seven claims (15, 18, 19, 21, 23 and 24) were amended, and none was added or cancelled. Accordingly, 9 claims remain pending for reconsideration and further examination.

In section 3 of the Office action, claims 15, 17, 19 and 21-25 were rejected under 35 U.S.C. 102(e) as being anticipated by Ouchi et al. (US6320691B1).

In section 5, claims 15, 18-19 and 22-23 were rejected under 35 U.S.C. 103(a) as being unpatentable over the conventional Art Admitted by Applicants in view of Ouchi et al., above.

In light of the remarks that follow, these rejections are respectfully traversed.

Independent claims 15, 19 and 23 of this application respectively include, among others, the following distinguishing limitations:

Claim 15: "... forming a plurality of the land groups on the printed circuit board, the land groups being arranged along [a] common axis at respective second intervals determined in accordance with the thermal expansion properties of the printed circuit board such that, in a pre-compression bonded state, the respective second intervals between adjacent ones of the land groups are smaller than the respective first intervals between adjacent ones of the corresponding tape carrier packages; ...; and,

during the thermocompression bonding, allowing the printed circuit board to expand such that the respective lands are substantially aligned with corresponding ones of the leads of the tape carrier packages." (Emphasis added.)

Claim 19: "... a plurality of conductive land groups formed on the substrate and disposed parallel to and spaced apart from each other at second intervals, each land group corresponding to a respective one of the conductive lead groups of the tape carrier packages, wherein the second intervals are respectively

smaller than the first intervals [of the conductive lead groups of the corresponding tape carrier packages]. (Emphasis added.)

Claim 23: "... forming printed circuit board land groups that correspond one-to-one with each of the tape carrier packages on a substrate such that intervals between the printed circuit board land groups are respectively smaller than intervals between the tape carrier packages." (Emphasis added.)

Like the present invention, Ouichi et al. teach a method of assembling the input leads ("electrodes") 9 of a driver TCP 20 to a PCB board 5 with thermocompression bonding techniques, wherein the output leads 6 of the TCP have previously been attached to an LCD substrate 1b using an anisotropic conductive adhesive film. ('691, Figs. 1-4B; col. 6, lines 10-25.)

However, unlike the present invention, the input leads 9 of Ouichi et al.'s TCPs are disposed perpendicular to the output leads 6 thereof, and accordingly, the corresponding lands 11 of the PCB 5 are also disposed perpendicular to the output leads. (See, Ouichi, Fig. 2) This is contrary to the limitation of claim 15 of the present invention that the land groups, and hence the lands, of the PCB be arranged along a common axis.

More importantly, although Ouichi et al. concede the existence of the problem overcome by the present invention, namely, lead/land misalignment due to the respective thermal expansions of the TCP and PCB substrates during the thermocompression bonding process, Ouichi et al. teach an altogether different technique for addressing the problem, namely, cooling the PCB board 104 from the TCP side with cooling air from a nozzle 108 during the thermocompression bonding procedure. ('691, Fig. 8, col. 9, lines 15-44; col. 9, lines 55-67, col. 10, lines 1-21.)

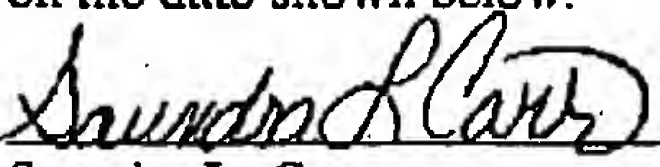
More specifically, there is no teaching or suggestion anywhere in Ouichi et al. for the technique taught by the present invention, namely, "pre-shrinking" the PCB such that the PCB lands are placed closer together than the corresponding TCP leads before thermocompression bonding, and such that, during the thermocompression bonding, the printed circuit board expands such that the respective lands are substantially aligned with corresponding ones of the leads of the TCPs. In fact, since Ouichi et al. teach the importance of ensuring that the TCP leads be precisely aligned with the corresponding PCB lands prior to thermocompression bonding, it is respectfully submitted that Ouichi et al. teach directly away from the present invention.

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In light of the foregoing and other reasons, Applicant respectfully submits that claims 15, 17-19 and 21-24 are allowable over the art of record, and accordingly, respectfully requests that a timely Notice of Allowance be issued in this case.

If there are any questions regarding this reply, the Examiner is invited to contact the undersigned at the number below.

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I hereby certify that this paper is being facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.	
	June 18, 2008
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Respectfully submitted,



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